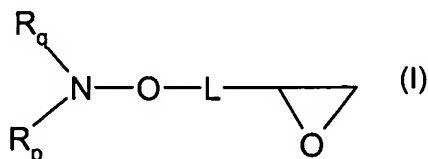


## In the Claims

1. (currently amended) A Method for the preparation of a comb or star copolymer comprising

a) ~~polymerising~~ polymerizing in a first step one or more epoxy group containing monomers to obtain a polyether, wherein at least one monomer is of formula (I)



wherein L is a linking group selected from the group consisting of C<sub>1</sub>-C<sub>18</sub>alkylene, phenylene, phenylene-C<sub>1</sub>-C<sub>18</sub>alkylene, C<sub>1</sub>-C<sub>18</sub>alkylene-phenylene, C<sub>1</sub>-C<sub>18</sub>alkylene-phenylene-oxy and C<sub>5</sub>-C<sub>12</sub>cycloalkylene;

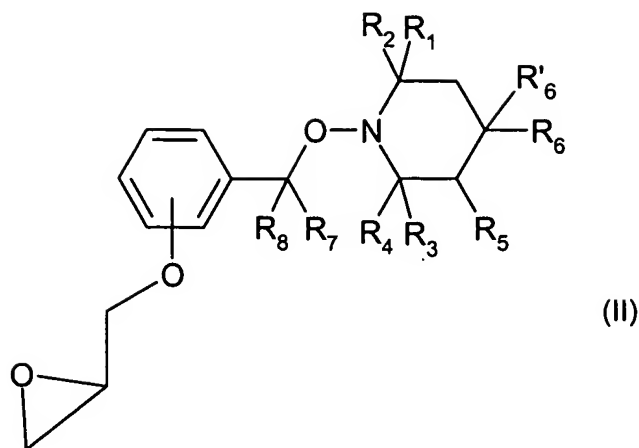
R<sub>p</sub> and R<sub>q</sub> are independently tertiary bound C<sub>4</sub>-C<sub>28</sub>alkyl groups which are unsubstituted or substituted by one or more electron withdrawing groups or by phenyl; or

R<sub>p</sub> and R<sub>q</sub> together form a 5 or 6 membered heterocyclic ring which is substituted at least by 4 C<sub>1</sub>-C<sub>4</sub>alkyl groups and which may be interrupted by a further nitrogen or oxygen atom;

and in a second step

b) adding to the polymer obtained in step a) at least one ethylenically unsaturated monomer or oligomer, heating the resulting mixture to a temperature where cleavage of the nitroxylether bond occurs and radical polymerization starts; and polymerizing to the desired degree.

2. (currently amended) A method~~process~~ according to claim 1 wherein the monomer of formula (I) is of formula (II)



wherein

$R_1, R_2, R_3$  and  $R_4$  are independently of each other  $C_1$ - $C_4$ alkyl;

$R_5$  is hydrogen or  $C_1$ - $C_4$ alkyl;

$R'_6$  is hydrogen and  $R_6$  is H,  $OR_{10}$ ,  $NR_{10}R_{11}$ ,  $-O-C(O)-R_{10}$  or  $NR_{11}-C(O)-R_{10}$ ;

$R_{10}$  and  $R_{11}$  independently are hydrogen,  $C_1$ - $C_{18}$ alkyl,  $C_2$ - $C_{18}$ alkenyl,  $C_2$ - $C_{18}$ alkynyl or  $C_2$ - $C_{18}$ alkyl which is substituted by at least one hydroxy group or, if  $R_6$  is  $NR_{10}R_{11}$ , taken together, form a  $C_2$ - $C_{12}$ alkylene bridge or a  $C_2$ - $C_{12}$ -alkylene bridge interrupted by at least one O atom; or

$R_6$  and  $R'_6$  together are both hydrogen, a group  $=O$  or  $=N-O-R_{20}$  wherein

$R_{20}$  is H, straight or branched  $C_1$ - $C_{18}$ alkyl,  $C_3$ - $C_{18}$ alkenyl or  $C_3$ - $C_{18}$ alkynyl, which may be unsubstituted or substituted, by one or more OH,  $C_1$ - $C_8$ alkoxy, carboxy,  $C_1$ - $C_8$ alkoxycarbonyl;

$C_5$ - $C_{12}$ cycloalkyl or  $C_5$ - $C_{12}$ cycloalkenyl;

phenyl,  $C_7$ - $C_9$ phenylalkyl or naphthyl which may be unsubstituted or substituted by one or more  $C_1$ - $C_8$ alkyl, halogen, OH,  $C_1$ - $C_8$ alkoxy, carboxy,  $C_1$ - $C_8$ alkoxycarbonyl;

$-C(O)-C_1-C_{36}$ alkyl, or an acyl moiety of a  $\alpha,\beta$ -unsaturated carboxylic acid having 3 to 5 carbon atoms or of an aromatic carboxylic acid having 7 to 15 carbon atoms;

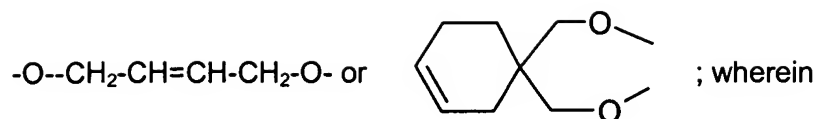
$-SO_3^-Q^+$ ,  $-PO(O^-Q^+)_2$ ,  $-P(O)(OR_2)_2$ ,  $-SO_2-R_2$ ,  $-CO-NH-R_2$ ,  $-CONH_2$ ,  $COOR_2$ , or  $Si(Me)_3$ , wherein  $Q^+$  is  $H^+$ , ammonium or an alkali metal cation; or

$R_6$  and  $R'_6$  are independently  $-O-C_1-C_{12}$ alkyl,  $-O-C_3-C_{12}$ alkenyl,  $-O-C_3-C_{12}$ alkynyl,  $-O-C_5-C_8$ cycloalkyl,  $-O$ -phenyl,  $-O$ -naphthyl,  $-O-C_7-C_9$ phenylalkyl; or

$R_6$  and  $R'_6$  together form one of the bivalent groups  $-O-C(R_{21})(R_{22})-CH(R_{23})-O-$ ,

$-O-CH(R_{21})-CH_2-C(R_{22})(R_{23})-O-$ ,  $-O-CH(R_{22})-CH_2-C(R_{21})(R_{23})-O-$ ,  $-O-CH_2-C(R_{21})(R_{22})-CH(R_{23})-O-$ ,

$-O$ -o-phenylene- $O-$ ,  $-O$ -1,2-cyclohexyliden- $O-$ ,



R<sub>21</sub> is hydrogen, C<sub>1</sub>-C<sub>12</sub>alkyl, COOH, COO-(C<sub>1</sub>-C<sub>12</sub>)alkyl or CH<sub>2</sub>OR<sub>24</sub>;

R<sub>22</sub> and R<sub>23</sub> are independently hydrogen, methyl ethyl, COOH or COO-(C<sub>1</sub>-C<sub>12</sub>)alkyl;

R<sub>24</sub> is hydrogen, C<sub>1</sub>-C<sub>12</sub>alkyl, benzyl, or a monovalent acyl residue derived from an aliphatic, cycloaliphatic or aromatic monocarboxylic acid having up to 18 carbon atoms; and

R<sub>7</sub> and R<sub>8</sub> are independently hydrogen or C<sub>1</sub>-C<sub>18</sub>alkyl.

**3. (original)** A method according to claim 2 wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> are methyl, or R<sub>1</sub> and R<sub>3</sub> are ethyl and R<sub>2</sub> and R<sub>4</sub> are methyl, or R<sub>1</sub> and R<sub>2</sub> are ethyl and R<sub>3</sub> and R<sub>4</sub> are methyl.

**4. (original)** A method according to claim 2 wherein R<sub>5</sub> is hydrogen or methyl.

**5. (original)** A method according to claim 2 wherein

R'<sub>6</sub> is hydrogen and R<sub>6</sub> is H, OR<sub>10</sub>, NR<sub>10</sub>R<sub>11</sub>, -O-C(O)-R<sub>10</sub> or NR<sub>11</sub>-C(O)-R<sub>10</sub>;

R<sub>10</sub> and R<sub>11</sub> independently are hydrogen, C<sub>1</sub>-C<sub>18</sub>alkyl, C<sub>2</sub>-C<sub>18</sub>alkenyl, C<sub>2</sub>-C<sub>18</sub>alkynyl or C<sub>2</sub>-C<sub>18</sub>alkyl which is substituted by at least one hydroxy group or, if R<sub>6</sub> is NR<sub>10</sub>R<sub>11</sub>, taken together, form a C<sub>2</sub>-C<sub>12</sub>alkylene bridge or a C<sub>2</sub>-C<sub>12</sub>-alkylene bridge interrupted by at least one O atom; or

R<sub>6</sub> and R'<sub>6</sub> together are both hydrogen, a group =O or =N-O-R<sub>20</sub> wherein

R<sub>20</sub> is H or straight or branched C<sub>1</sub>-C<sub>18</sub>alkyl.

**6. (currently amended)** A method according to claim 2 wherein

R<sub>6</sub> and R'<sub>6</sub> together form one of the bivalent groups -O-C(R<sub>21</sub>)(R<sub>22</sub>)-CH(R<sub>23</sub>)-O-,

-O-CH(R<sub>21</sub>)-CH<sub>22</sub>-C(R<sub>22</sub>)(R<sub>23</sub>)-O-, -O-CH(R<sub>22</sub>)-CH<sub>2</sub>-C(R<sub>21</sub>)(R<sub>23</sub>)-O-[[,]] or

-O-CH<sub>2</sub>-C(R<sub>21</sub>)(R<sub>22</sub>)-CH(R<sub>23</sub>)-O-] where and R<sub>21</sub>, R<sub>22</sub> and R<sub>23</sub> have the meaning as defined in claim 2.

7. **(currently amended)** A method according to claim 1 where step a) comprises polymerizing an ~~wherein the~~ epoxy group containing monomer different from formula (I), which monomer is selected from the group consisting of ethylene oxide, propylene oxide, 2,3-epoxypropyl-phenylether, 2,3-epoxypropyl-4-nonyl-phenylether, epichlorohydrine and 2,3-epoxypropyl-2,2,3,3,4,4,5,5-octafluoropentylether.

8. **(currently amended)** A method according to claim 1 wherein in ~~step~~ Step a) the weight ratio of the monomer of formula (I) to the sum of the other monomers is from 99:1 to 1:99.

9. **(currently amended)** A method according to claim 1 wherein in step b) the ethylenically unsaturated monomer or oligomer is selected from the group consisting of styrene, substituted styrene, conjugated dienes, vinyl acetate, vinylpyrrolidone, vinylimidazole, maleic anhydride, (alkyl)acrylic acid anhydrides, (alkyl)acrylic acid salts, (alkyl)acrylic esters, (meth)acrylonitriles, (alkyl)acrylamides, vinyl halides and vinylidene halides.

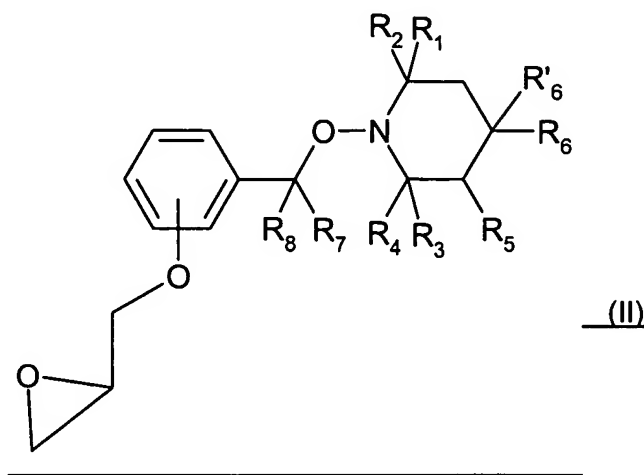
10. **(currently amended)** A method according to claim 9 wherein in step b) the ethylenically unsaturated monomers are styrene, methylacrylate, ethylacrylate, butylacrylate, isobutylacrylate, tert[[.]] butylacrylate, hydroxyethylacrylate, hydroxypropylacrylate, dimethylaminoethylacrylate, methyl(meth)acrylate, ethyl(meth)acrylate, butyl(meth)acrylate, hydroxyethyl(meth)acrylate, hydroxypropyl(meth)acrylate, dimethylaminoethyl(meth)acrylate, acrylonitrile, acrylamide, methacrylamide or dimethylaminopropyl-methacrylamide.

11. **(original)** A method according to claim 1 wherein in step b) the weight ratio between the polyether prepared in step a) and the ethylenically unsaturated monomer is from 90:10 to 10:90.

12. **(original)** A method according to claim 1 wherein in step b) the polymerization temperature is from 80° C to 160° C.

**13. (currently amended)** A composition comprising a compound of formula (II) ~~as defined in claim 2~~, at least one epoxy functional monomer different from that of formula (II) and optionally water or an organic solvent or a mixture ~~[[s]]~~ thereof.

where the compound of formula (II) is



wherein

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are independently of each other C<sub>1</sub>-C<sub>4</sub>alkyl;

R<sub>5</sub> is hydrogen or C<sub>1</sub>-C<sub>4</sub>alkyl;

R'<sub>6</sub> is hydrogen and R<sub>6</sub> is H, OR<sub>10</sub>, NR<sub>10</sub>R<sub>11</sub>, -O-C(O)-R<sub>10</sub> or NR<sub>11</sub>-C(O)-R<sub>10</sub>;

R<sub>10</sub> and R<sub>11</sub> independently are hydrogen, C<sub>1</sub>-C<sub>18</sub>alkyl, C<sub>2</sub>-C<sub>18</sub>alkenyl, C<sub>2</sub>-C<sub>18</sub>alkinyl or C<sub>2</sub>-C<sub>18</sub>alkyl which is substituted by at least one hydroxy group or, if R<sub>6</sub> is NR<sub>10</sub>R<sub>11</sub>, taken together, form a C<sub>2</sub>-C<sub>12</sub>alkylene bridge or a C<sub>2</sub>-C<sub>12</sub>-alkylene bridge interrupted by at least one O atom; or

R<sub>6</sub> and R'<sub>6</sub> together are both hydrogen, a group =O or =N-O-R<sub>20</sub> wherein

R<sub>20</sub> is H, straight or branched C<sub>1</sub>-C<sub>18</sub>alkyl, C<sub>3</sub>-C<sub>18</sub>alkenyl or C<sub>3</sub>-C<sub>18</sub>alkinyl, which may be unsubstituted or substituted, by one or more OH, C<sub>1</sub>-C<sub>8</sub>alkoxy, carboxy, C<sub>1</sub>-C<sub>8</sub>alkoxycarbonyl;

C<sub>5</sub>-C<sub>12</sub>cycloalkyl or C<sub>5</sub>-C<sub>12</sub>cycloalkenyl;

phenyl, C<sub>7</sub>-C<sub>9</sub>phenylalkyl or naphthyl which may be unsubstituted or substituted by one or more

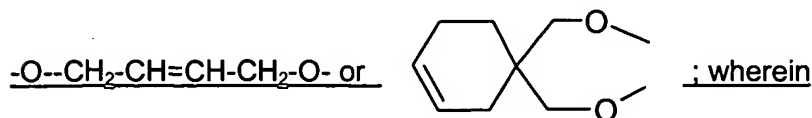
C<sub>1</sub>-C<sub>8</sub>alkyl, halogen, OH, C<sub>1</sub>-C<sub>8</sub>alkoxy, carboxy, C<sub>1</sub>-C<sub>8</sub>alkoxycarbonyl;

-C(O)-C<sub>1</sub>-C<sub>36</sub>alkyl, or an acyl moiety of a  $\alpha,\beta$ -unsaturated carboxylic acid having 3 to 5 carbon atoms or of an aromatic carboxylic acid having 7 to 15 carbon atoms;

-SO<sub>3</sub><sup>-</sup>Q<sup>+</sup>, -PO(O<sup>-</sup>Q<sup>+</sup>)<sub>2</sub>, -P(O)(OR<sub>2</sub>)<sub>2</sub>, -SO<sub>2</sub>-R<sub>2</sub>, -CO-NH-R<sub>2</sub>, -CONH<sub>2</sub>, COOR<sub>2</sub>, or Si(Me)<sub>3</sub>, wherein Q<sup>+</sup> is H<sup>+</sup>, ammonium or an alkali metal cation; or

$R_6$  and  $R'_6$  are independently  $-O-C_1-C_{12}$ alkyl,  $-O-C_3-C_{12}$ alkenyl,  $-O-C_3-C_{12}$ alkinyl,  $-O-C_5-C_8$ cycloalkyl,  $-O$ -phenyl,  $-O$ -naphthyl,  $-O-C_7-C_9$ phenylalkyl; or

$R_6$  and  $R'_6$  together form one of the bivalent groups  $-O-C(R_{21})(R_{22})-CH(R_{23})-O-$ ,  $-O-CH(R_{21})-CH_2-C(R_{22})(R_{23})-O-$ ,  $-O-CH(R_{22})-CH_2-C(R_{21})(R_{23})-O-$ ,  $-O-CH_2-C(R_{21})(R_{22})-CH(R_{23})-O-$ ,  $-O$ -o-phenylene- $O-$ ,  $-O$ -1,2-cyclohexyliden- $O-$ ,



$R_{21}$  is hydrogen,  $C_1-C_{12}$ alkyl,  $COOH$ ,  $COO-(C_1-C_{12})$ alkyl or  $CH_2OR_{24}$ ;

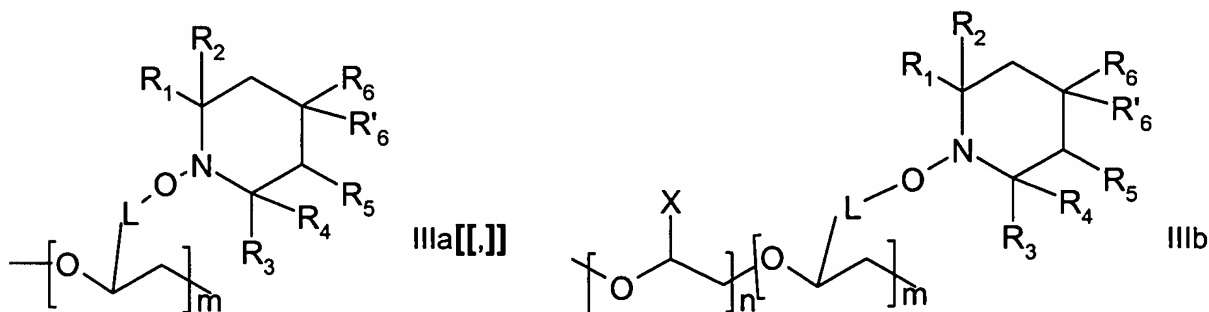
$R_{22}$  and  $R_{23}$  are independently hydrogen, methyl ethyl,  $COOH$  or  $COO-(C_1-C_{12})$ alkyl;

$R_{24}$  is hydrogen,  $C_1-C_{12}$ alkyl, benzyl, or a monovalent acyl residue derived from an aliphatic, cycloaliphatic or aromatic monocarboxylic acid having up to 18 carbon atoms; and

$R_7$  and  $R_8$  are independently hydrogen or  $C_1-C_{18}$ alkyl.

14. (currently amended) A polyether obtained ~~able~~ according to step a) of the method of claim 1.

15. (currently amended) A polyether obtained according to step a) of claim 2, having a repetitive structural element of formula IIIa or IIIb



wherein  $R_1, R_2, R_3, R_4, R_5, R_6, R'_6$  and  $L$  are as defined above  $[[, ]]$   $m$  and  $n$  are number from 10 to 1000 and

$X$  is  $H$ ,  $CH_3$ ,  $CH_2-O-C_6H_5$ ,  $CH_2-O-C_6H_5-C_9H_{19}$ ,  $-CH_2Cl$  or  $CH_2-O-CH_2-(CF_2)_3CHF_2$ .

**16. (currently amended)** A comb or star copolymer obtained~~able~~ according to the method of claim 1.

**17. (currently amended)** A comb or star copolymer according to claim 16 wherein the ethylenically unsaturated monomer ~~forming the comb or star~~ is selected from the group consisting of styrene, substituted styrene, (alkyl)acrylic acidanhydrides, (alkyl)acrylic acid salts, (alkyl)acrylic esters, (meth)acrylonitriles and (alkyl)acrylamides.

**18. (canceled)**

**19. (currently amended)** ~~Use of a~~ A composition comprising a comb or star copolymer obtained~~able~~ according to the method of claim 1 ~~as adhesive, surface modifier, surfactant or compatibilizer in and a~~ thermoplastic, elastic or thermosetting polymer~~[[s]] or as plastic material for extrusion or injection molding for shaping parts.~~